

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/043071 A2

(51) International Patent Classification⁷:

F41H

(21) International Application Number:

PCT/US2004/020989

(22) International Filing Date:

1 July 2004 (01.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/483,630	1 July 2003 (01.07.2003)	US
60/521,336	2 April 2004 (02.04.2004)	US
60/567,795	5 May 2004 (05.05.2004)	US

(71) Applicant: ANTIBALLISTIC SECURITY AND PROTECTION INC. [US/US]; 1051 Landon Lane, Arnold, MD 21012 (US).

(72) Inventors: COLLIFLOWER, Anne, B.; 907 Beckford Drive 163, Henderson, NC 27536 (US). COLLIFLOWER, Gerald, Boyd; 907 Beckford Drive 163, Henderson, NC 27536 (US). QUINN, Gale, Leslie; 1051 Landon Lane, Arnold, MD 21012 (US). QUINN, James, Gilbert; 1051 Landon Lane, Arnold, MD 21012 (US). PERRY, Prentice, J.; 11485 Hwy 119S, Burlington, NC 27217 (US).

(74) Agents: WYCHE, Myron, Keith et al.; Connolly Bove Lodge & Hutz LLP, 1990 M Street, N.W., Suite 800, Washington, DC 20036-3425 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ANTIBALLISTIC MATERIALS AND PROCESS

(57) Abstract: An antiballistic armored panel comprising at least an interior surface, a first panel adjacent to the interior surface and mounted in a plurality of tracks, a first set of AramidFiber sheets adjacent and attached to the first panel, a second set of Aramid sheets attached to the first set of Aramid-Fiber sheets, a first backer board adjacent and attached to the second set of Aramid-Fiber sheets, a layer of tiles adjacent and attached to the first backer board, and a second backer board adjacent and attached to the layer of tiles. A second panel may be attached adjacent to the second backer board along with a layer of forced entry steel mesh to provide anti-forced entry capability to the antiballistic armored panel.



WO 2005/043071 A2

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/043071 A3

(51) International Patent Classification⁷: **F41H 5/04**

(21) International Application Number:
PCT/US2004/020989

(22) International Filing Date: 1 July 2004 (01.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/483,630 1 July 2003 (01.07.2003) US
60/521,336 2 April 2004 (02.04.2004) US
60/567,795 5 May 2004 (05.05.2004) US

(71) Applicant: ANTIBALLISTIC SECURITY AND PROTECTION INC. [US/US]; 1051 Landon Lane, Arnold, MD 21012 (US).

(72) Inventors: COLLIFLOWER, Anne, B.; 907 Beckford Drive 163, Henderson, NC 27536 (US). COLLIFLOWER, Gerald, Boyd; 907 Beckford Drive 163, Henderson, NC 27536 (US). QUINN, Gale, Leslie; 1051 Landon Lane, Arnold, MD 21012 (US). QUINN, James,

Gilbert; 1051 Landon Lane, Arnold, MD 21012 (US). PERRY, Prentice, J.; 11485 Hwy 119S, Burlington, NC 27217 (US).

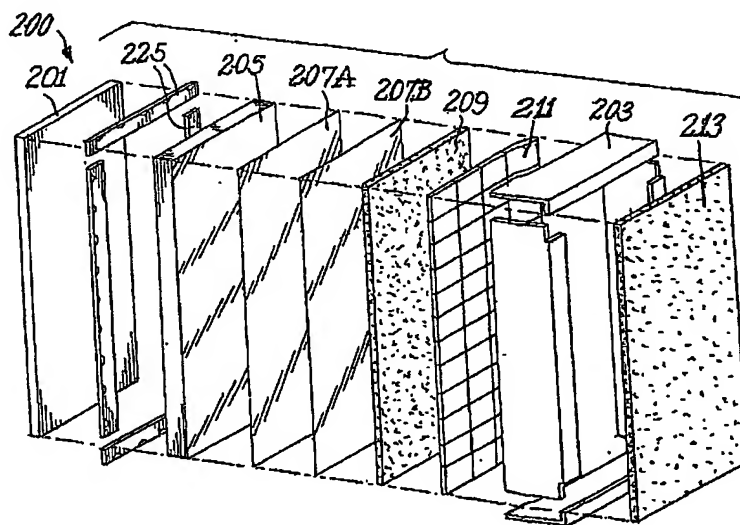
(74) Agents: WYCHE, Myron, Keith et al.; Connolly Bove Lodge & Hutz LLP, 1990 M Street, N.W., Suite 800, Washington, DC 20036-3425 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: ANTIBALLISTIC MATERIALS AND PROCESS



(57) Abstract: An antiballistic armored panel (200) comprising at least an interior surface (201), a first panel (205) adjacent to the interior surface and mounted in a plurality of tracks (203), a first set of Aramid-Fiber sheets (207A) adjacent and attached to the first panel, a second set of Aramid sheets (207B) attached to the first set of Aramid-Fiber sheets, a first backer board (209) adjacent and attached to the second set of Aramid-Fiber sheets, a layer of tiles (211) adjacent and attached to the first backer board, and a second backer board (213) adjacent and attached to the layer of tiles. A second panel (615) may be attached adjacent to the second backer board along with a layer of forced entry steel mesh (919) to provide anti-forced entry capability to the antiballistic armored panel.



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

(88) Date of publication of the international search report:
6 October 2005

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.